Author Index

ABBOTT, L. K. (see BRAUNBERGER, P. G.), 673
AFREEN-ZOBAYED, F. (see ARMSTRONG, J.), 601
AGGANGAN, N. S., DELL, B. & MALAJCZUK, N., Effects of soil pH on the ectomycorrhizal response of *Eucalyptus urophylla* seedlings, 539
ALPIZAR, L. (see LEÓN, R.), 227
ALVES, B. J. R. (see IBIJBIJEN, J.), 353
ARMSTRONG, J., AFREEN-ZOBAYED, F. & ARMSTRONG, W., *Phragmites* die-back: sulphide- and acetic acid-induced bud and root death, lignifications, and blockages within aeration and vascular systems, 601
ARMSTRONG, R. A. & SMITH, S. N., Factors determining the growth curve of the foliose lichen *Parmelia conspersa*, 517
ARMSTRONG, W. (see ARMSTRONG, J.), 601
ARNDT, S. (see HAAG–KERWER, A.), 215
ASHENDEN, T. W. (see WHITFIELD, C. P.), 287
ASHFORD, A. E. (see YOUNG, N.), 13
AZCÓN, R. (see RUIZ-LOZANO, J. M.), 327
AZCÓN-AGUILAR, C. (see BAREA, J. M.), 361
BALL, E. (see HAAG–KERWER, A.), 215
BAREA, J. M., TOBAR, R. M. & AZCÓN-AGUILAR, C., Effect of a genetically modified *Rhizobium meliloti* inoculant on the development of arbuscular mycorrhizas, root morphology, nutrient uptake and biomass accumulation in *Medicago sativa*, 361
BARNES, J. D. (see PFIRRMANN, T.), 267
BAYLISS, C., VAN DER WELLE, C. & CANNY, M. J., Determinations of dye diffusivities in the cell-wall apoplast of roots by a rapid method, 1
BEBRESE, I. K. A. (see VEENENDAAL, E. M.), 487
BEERLING, D. J. & KELLY, C. K., Evolutionary comparative analyses of the relationship between leaf structure and function, 35
——, HEATH, J., WOODWARD, F. I., MANSFIELD, T. A., Drought–CO_2 interactions in trees: observations and mechanisms, 235
BODDEY, R. M. (see IBIJBIJEN, J.), 353
BODDY, L. (see DURSUN, S.), 155, 167
BONNETT, G. D. (see ST. JOHN, J. A.), 197
BORBOA, L. & DE LA TORRE, C., The genotoxicity of Zn(II) and Cd(II) in *Allium cepa* root meristemic cells, 481
BORLAND, A. M., A model for the partitioning of photosynthetically fixed carbon during the C_3-CAM transition in *Sedum telephium*, 433
BOUCAUD, J. (see GUERRAND, D.), 205
BRAUNBERGER, P. G., ABBOTT, L. K. & ROBSON, A. D., Infectivity of arbuscular mycorrhizal fungi after wetting and drying, 673
BURKE, R. M. (see CAIRNEY, J. W. G.), 685
BUSCH, U. (see PFIRRMANN, T.), 267
BUTTLER, A., WARNER, B. G., GROSVERNIER, P. & MATTHEY, Y., Vertical patterns of testate amoebae (Protozoa: Rhizopoda) and peat-forming vegetation on cutover bogs in the Jura, Switzerland, 371
CAIRNEY, J. W. G. & BURKE, R. M., Physiological heterogeneity within fungal mycelia: an important concept for a functional understanding of the ectomycorrhizal symbiosis, 685
CANET, D., ROHR, R., CHAMEL, A. & GUILLAIN, F., Atomic force microscopy study of isolated ivy leaf cuticles observed directly and after embedding in Epon®, 571
CANNY, M. J. (see BAYLISS, C.), 1
CAPORN, S. J. M. (see POTTER, L.), 649
CARRION, J. S. & DUPRE, M., Late Quaternary vegetational history at Navarrés, Eastern Spain. A two core approach, 177
CHALIFOUR, F.-P. (see THÉBERGE, M.-C.), 657
CHAMEL, A. (see CANET, D.), 571
CLEYET-MAREL, J.-C. (see KARKOURI, K. El), 143
COCHARD, H., RIDOLFI, M. & DREYER, E., Responses to water stress in an ABA-unresponsive hybrid poplar (*Populus koreana* × *trichocarpa* cv. Peace), 455
COLLS, J. J. (see WILTSHIRE, J. J. J.), 623
COLPAERT, J. V. & VAN TICHELEN, K. K., Decomposition, nitrogen and phosphorus mineralization from beech leaf litter colonized by ectomycorrhizal or litter-decomposing basidiomycetes, 123
——, VAN LAERE, A., A comparison of the extracellular enzyme activities of two and a ectomycorrhiza leaf-saprotrophic basidiomycete colonizing beech leaf litter, 133
CRAIGON, J. (see WILTSHIRE, J. J. J.), 623
CROWLEY, D. E. (see MARSCHNER, P.), 115
CUNNINGHAM, S. D. (see HUANG, J. W.), 75
DAVISON, A. W. (see WHITFIELD, C. P.), 287
DE LA TORRE, C. (see BORBOA, L.), 481
DE SILVA, D. L. R., HONOUR, S. J. & MANSFIELD, T. A., Estimations of apoplastic concentrations of K^+ and Ca^{2+} in the vicinity of stomatal guard cells, 463
DELL, B. (see AGGANGAN, N. S.), 539
DIXON, K. W. (see HUTTON, B. J.), 665
DREYER, E. (see RIDOLF, M.), 445
——, (see COCHARD, H.), 455
DUCKETT, J. G. (see LIGRONE, R.), 503
DUPRE, M. (see CARRION, J. S.), 177
DURSUN, S., FRANKLAND, J. C., BODDY, L. & INESON, P., Sulphite and pH effects on CO_2 evolution by fungi growing on decomposing coniferous needles, 155
——, INESON, P., FRANKLAND, J. C., BODDY, L., Sulphur dioxide effects on fungi growing on leaf litter and agar media, 167
EL-KEBLAWY, A. & LOVETT-DOUST, J., Resource re-allocation following fruit removal in cucurbits: patterns in cantaloupe melons, 413
ESCAMILLA, J. A. (see LEÓN, R.), 227
FARAGE, P. K., The effect of ozone fumigation over one season on photosynthetic processes of *Quercus robur* seedlings, 279
FARRAR, J. F. (see HIBBERD, J. M.), 309, 317, 551
FAUVEAU, M. L. (see RIDOLF, M.), 445
FISCHER-SCHLIEBS, E. (see KASTRUP, V.), 61
FOOT, J. P. (see POTTER, L.), 649
FRANKLAND, J. C. (see DURSUN, S.), 155, 167
GARREC, J. P. (see RIDOLF, M.), 445
GEBAUER, R. L. E., REYNOLDS, J. F. & STRAIN, B. R., Allometric relations and growth in *Pinus taeda*: the effect of elevated CO_2 and changing N availability, 85
GEßLER, A. (see SCHNEIDER, S.), 103
GLOSER, V., SCHEURWATER, I. & LAMBERS, H., The interactive effect of irradiance and source of nitrogen on growth and root respiration of *Calamagrostis epigejos*, 407
GOGALA, N. (see REGVAR, M.), 703
GORNALL, R. J. (see WENTWORTH, J. E.), 641
GRAMS, T. E. E. (see HAAG–KERWER, A.), 215
GREEN, J. R. (see HUTCHISON, K. A.), 579
GROSVERNIER, P. (see BUTTLER, A.), 371
GUERRAND, D., PRUD'HOMME, M.-P. & BOUCAUD, J., Fructan metabolism in expanding leaves, mature leaf sheaths and mature leaf blades of *Lolium perenne*. Fructan synthesis, fructosyltransferase and invertase activities, 205
GUILLAIN, F. (see CANET, D.), 571
HAAG–KERWER, A., GRAMS, T. E. E., OLIVARES, E., BALL, E., ARNDT, S., POPP, M., MEDINA, E. & LÜTTGE, U., Comparative measurements of gas-exchange, acid accumulation and chlorophyll *a* fluorescence of different species of *Clusia* showing C_3 photosynthesis, or crassulacean acid metabolism, at the same field site in Venezuela, 215
HAMPP, R. (see SCHAEFFER, C.), 697
HANEMANN, U. (see SCHNEIDER, S.), 103
HEATH, J. (see BEERLING, D. J.), 235
HIBBERD, J. M., WHITBREAD, R. & FARRAR, J. F., Effect of 700 μmol mol^{-1} CO_2 and infection with powdery mildew on the growth and carbon partitioning of barley, 309
——, RICHARDSON, P., WHITBREAD, R., FARRAR, J. F., Effects of leaf age, basal meristem and infection with powdery mildew on photosynthesis in barley grown in 700 μmol mol^{-1} CO_2, 317
——, WHITBREAD, R., FARRAR, J. F., Erratum: *The New Phytologist* **133** (1996), 659–671, 551

HONOUR, S. J. (see DE SILVA, D. L. R.), 463
HOWALD, W. N. (see SKUBATZ, H.), 631
HUANG, J. W. & CUNNINGHAM, S. D., Lead phytoextraction: species variation in lead uptake and translocation, 75
HUHN, G. & SCHULZ, H., Contents of free amino acids in Scots pine needles from field sites with different levels of nitrogen deposition, 95
HUTCHISON, K. A., O'CONNELL, R. J., PAIN, N. A. & GREEN, J. R., A bean epicuticular glycoprotein is present in the extracellular matrices around infection structures of the anthracnose fungus, *Colletotrichum lindemuthianum*, 579
HUTTON, B. J., DIXON, K. W., SIVASITHAMPARAM, K. & PATE, J. S., Inoculum potential of ericoid endophytes of Western Australian heaths (Epacridaceae), 665
IBIJBIJEN, J., URQUIAGA, S., ISMAILI, M., ALVES, B. J. R. & BODDEY, R. M., Effect of arbuscular mycorrhizal fungi on growth, mineral nutrition and nitrogen fixation of three varieties of common beans (*Phaseolus vulgaris*), 353
INESON, P. (see DURSUN, S.), 155, 167
IRIGOYEN, J. J., PEREZ DE JUAN, J. & SANCHEZ-DIAZ, M., Drought enhances chilling tolerance in a chilling-sensitive maize (*Zea mays*) variety, 53
ISMAILI, M. (see IBIJBIJEN, J.), 353
JOHANN, P. (see SCHAEFFER, C.), 697
JULIAN, A. M. (see WHARTON, P. S), 25
KARKOURI, K. El, CLEYET-MAREL, J.-C. & MOUSAIN, D., Isozyme variation and somatic incompatibility in populations of the ectomycorrhizal fungus *Suillus collinitus*, 143
KASTRUP, V., STEIGER, S., LÜTTGE, U. & FISCHER-SCHLIEBS, E., Regulation effects of zinc on corn root plasma membrane H^+-ATPase, 61
KELLY, C. K. (see BEERLING, D. J.), 35
KINGSTON-SMITH, A. H. & POLLOCK, C. J., Tissue level localization of acid invertase in leaves: an hypothesis for the regulation of carbon export, 423
KÜCHENHOFF, H. (see PFIRRMANN, T.), 267
KULLMAN, L., Rise and demise of cold-climate *Picea abies* forest in Sweden, 243
KUNKEL, D. D. (see SKUBATZ, H.), 631
LABEL, P. (see RIDOLF, M.), 445
LAMBAIS, M. R. & MEHDY, M. C., Soybean roots infected by *Glomus intraradices* strains differing in infectivity exhibit differential chitinase and β-1,3-glucanase expression, 531
LAMBERS, H. (see GLOSER, V.), 407
LATIPOVA, G. (see OUGHAM, H. J.), 5
LEE, J. A. (see POTTER, L.), 649
LEÓN, R., SANTAMARÍA, J. M., ALPIZAR, L., ESCAMILLA, J. A. & OROPEZA, C., Physiological and biochemical changes in shoots of coconut palms affected by lethal yellowing, 227
LIGRONE, R. & DUCKETT, J. G., Polarity and endoplasmic microtubules in food-conducting cells of mosses: an experimental study, 503
LOVETT-DOUST, J. (see EL-KEBLAWY, A.), 413
LÜTTGE, U. (see KASTRUP, V.), 61
——, (see HAAG–KERWER, A.), 215
MALAJCZUK, N. (see AGGANGAN, N. S.), 539
MANSFIELD, T. A. (see BEERLING, D. J.), 235
——, (see DE SILVA, D. L. R.), 463
MARSCHNER, P. & CROWLEY, D. E., Root colonization of mycorrhizal and non-mycorrhizal pepper (*Capsicum annuum*) by *Pseudomonas fluorescens* 2-79RL, 115
MARSHALL, W. A., Aerial dispersal of lichen soredia in the maritime Antarctic, 523
MATTHEY, Y. (see BUTTLER, A.), 371
MCKENDRICK, S. L., The effects of fertilizer and root competition on seedlings of *Orchis morio* and *Dactylorhiza fuchsii* in chalk and clay soil, 335
——, The effects of shade on seedlings of *Orchis morio* and *Dactylorhiza fuchsii* in chalk and clay soil, 343
MEDINA, E. (see HAAG–KERWER, A.), 215
MEHDY, M. C. (see LAMBAIS, M. R.), 531
MOOKHERJEE, B. (see SKUBATZ, H.), 631
MORECROFT, M. D. & WOODWARD, F. I., Experiments on the causes of altitudinal differences in the leaf nutrient contents, size and $\delta^{13}C$ of *Alchemilla alpina*, 471
MOUSAIN, D. (see KARKOURI, K. El), 143
NEHLS, U. (see SCHAEFFER, C.), 697
O'CONNELL, R. J. (see HUTCHISON, K. A.), 579
OLIVARES, E. (see HAAG–KERWER, A.), 215
OROPEZA, C. (see LEÓN, R.), 227
OUGHAM, H. J., LATIPOVA, G. & VALENTINE, J., Morphological and biochemical characterization of spikelet development in naked oats (*Avena sativa*), 5
PAIN, N. A. (see HUTCHISON, K. A.), 579
PALMA, J. M. (see RUIZ-LOZANO, J. M.), 327
PATE, J. S. (see HUTTON, B. J.), 665
PAYER, H.-D. (see PFIRRMANN, T.), 267
PEREZ DE JUAN, J. (see IRIGOYEN, J. J.), 53
PETERS, J. C. & SHAW, M. W., Effect of artificial exclusion and augmentation of fungal plant pathogens on a regenerating grassland, 295
PFIRRMANN, T., BARNES, J. D., STEINER, K., SCHRAMEL, P., BUSCH, U., KÜCHENHOFF, H. & PAYER, H.-D., Effects of elevated CO_2, O_3 and K deficiency on Norway spruce (*Picea abies*): nutrient supply, content and leaching, 267
POLLOCK, C. J. (see KINGSTON-SMITH, A. H.), 423
POPP, M. (see HAAG–KERWER, A.), 215
POTTER, L., FOOT, J. P., CAPORN, S. J. M. & LEE, J. A., The effects of long-term elevated ozone concentrations on the the growth and photosynthesis of *Sphagnum recurvum* and *Polytrichum commune*, 649
PREES, M. C. (see SEEL, W. E.), 495
PRÉVOST, D. (see THÉBERGE, M.-C.), 657
PRUD'HOMME, M.-P. (see GUERRAND, D.), 205
REGVAR, M., GOGALA, N. & ZALAR, P., Effects of jasmonic acid on mycorrhizal *Allium sativum*, 703
RENGEL, Z., Tansley Review No. 89. Uptake of aluminium by plant cells, 389
RENNENBERG, H. (see SCHNEIDER, S.), 103
——, (see THOENE, B.), 257
REYNOLDS, J. F. (see GEBAUER, R. L. E.), 85
RICHARDSON, P. (see HIBBERD, J. M.), 317
RIDOLF, M., FAUVEAU, M. L., LABEL, P., GARREC, J. P. & DREYER, E., Responses to water stress in an ABA-unresponsive hybrid poplar (*Populus koreana* × *trichocarpa* cv. Peace), 445
RIDOLFI, M. (see COCHARD, H.), 455
ROBSON, A. D. (see BRAUNBERGER, P. G.), 673
ROHR, R. (see CANET, D.), 571
ROUMET, C. & ROY, J., Prediction of the growth response to elevated CO_2: a search for physiological criteria in closely related grass species, 615
ROY, J. (see ROUMET, C.), 615
RUIZ-LOZANO, J. M., AZCÓN, R. & PALMA, J. M., Superoxide dismutase activity in arbuscular mycorrhizal *Lactuca sativa* plants subjected to drought stress, 327
ST. JOHN, J. A., BONNETT, G. D. & SIMPSON, R. J., A method for rapid quantification of sucrose and fructan oligosaccharides suitable for enzyme and physiological studies, 197
SANCHEZ-DIAZ, M. (see IRIGOYEN, J. J.), 53
SANTAMARÍA, J. M. (see LEÓN, R.), 227
SCHAEFFER, C., JOHANN, P., NEHLS, U. & HAMPP, R., Evidence for an up-regulation of the host and a down-regulation of the fungal phosphofructokinase activity in ectomycorrhizas of Norway spruce and fly agaric, 697
SCHEURWATER, I. (see GLOSER, V.), 407
SCHNEIDER, S., GEßLER, A., WEBER, P., VON SENGBUSCH, D., HANEMANN, U. & RENNENBERG, H., Soluble N compounds in trees exposed to high loads of N: a comparison of spruce (*Picea abies*) and beech (*Fagus sylvatica*) grown under field conditions, 103
SCHRAMEL, P. (see PFIRRMANN, T.), 267
SCHULZ, H. (see HUHN, G.), 95
SEEL, W. E. & PREES, M. C., Effects of repeated parasitism by *Rhinanthus minor* on the growth and photosynthesis of a perennial grass, *Poa alpina*, 495
SHAW, M. W. (see PETERS, J. C.), 295
SIMPSON, R. J. (see ST. JOHN, J. A.), 197
SIVASITHAMPARAM, K. (see HUTTON, B. J.), 665
SKUBATZ, H., KUNKEL, D. D., HOWALD, W. N., TRENKLE, R & MOOKHERJEE, B., The *Sauromatum guttatum* appendix as an osmophore: excretory pathways, composition of volatiles and attractiveness to insects, 631
SMITH, S. N. (see ARMSTRONG, R. A.), 517
STEIGER, S. (see KASTRUP, V.), 61
STEINBERG, S. L., Mass and energy exchange between the atmosphere and leaf influence gas pressurization in aquatic plants, 587
STEINER, K. (see PFIRRMANN, T.), 267

STRAIN, B. R. (see GEBAUER, R. L. E.), 85
SWAINE, M. D. (see VEENENDAAL, E. M.), 487
THÉBERGE, M.-C., PRÉVOST, D. & CHALIFOUR, F.-P., The effect of different temperatures on the fatty acid composition of *Rhizobium leguminosarum* bv. *viciae* in the faba bean symbiosis, 657
THOENE, B., RENNENBERG, H. & WEBER, P., Absorption of atmospheric NO_2 by spruce (*Picea abies*) trees. II. Parameterization of NO_2 fluxes by controlled dynamic chamber experiments, 257
TOBAR, R. M. (see BAREA, J. M.), 361
TRENKLE, R (see SKUBATZ, H.), 631
UNSWORTH, M. H. (see WILTSHIRE, J. J. J.), 623
URQUIAGA, S. (see IBIJBIJEN, J.), 353
VALENTINE, J. (see OUGHAM, H. J.), 5
VAN DER WELLE, C. (see BAYLISS, C.), 1
VAN LAERE, A. (see COLPAERT, J. V.), 133
VAN TICHELEN, K. K. (see COLPAERT, J. V.), 123
VEENENDAAL, E. M., BEBRESE, I. K. A., WALSH, M. F. & SWAINE, M. D., Root hemiparasitism in a West African rainforest tree *Okoubaka aubrevillei* (Santalaceae), 487
VON SENGBUSCH, D. (see SCHNEIDER, S.), 103
WALSH, M. F. (see VEENENDAAL, E. M.), 487
WARNER, B. G. (see BUTTLER, A.), 371
WEBER, P. (see SCHNEIDER, S.), 103
——, (see THOENE, B.), 257
WENTWORTH, J. E. & GORNALL, R. J., Cytogenetic evidence for autopolyploidy in *Parnassia palustris*, 641
WHARTON, P. S & JULIAN, A. M., A cytological study of compatible and incompatible interactions between *Sorghum bicolor* and *Colletotrichum sublineolum*, 25
WHITBREAD, R. (see HIBBERD, J. M.), 309, 317, 551
WHITFIELD, C. P., DAVISON, A. W. & ASHENDEN, T. W., Interactive effects of ozone and soil volume on *Plantago major*, 287
WILTSHIRE, J. J. J., WRIGHT, C. J., COLLS, J. J., CRAIGON, J. & UNSWORTH, M. H., Some foliar characteristics of ash trees (*Fraxinus excelsior*) exposed to ozone episodes, 623
WOODWARD, F. I. (see BEERLING, D. J.), 235
——, (see MORECROFT, M. D.), 471
WRIGHT, C. J. (see WILTSHIRE, J. J. J.), 623
YEOMAN, C. L. (see YEOMAN, M. M.), 553
YEOMAN, M. M. & YEOMAN, C. L., Tansley Review No. 90 Manipulating secondary metabolism in cultured plant cells, 553
YOUNG, N. & ASHFORD, A. E., The effects of rind damage and regeneration on permeability of the apoplast in sclerotia of *Sclerotinia minor*, 13
ZALAR, P. (see REGVAR, M.), 703

Subject Index

ABA, 445
Acid invertase, 423
Aerenchyma and vascular occlusions, 601
Aerobiology, 523
AFM, 571
Air pollutants, 95
Air temperature, 257
Allium cepa, 481
Allium sativum, 703
Allocation, 85
Allometry, 85
Altitude, 471
Aluminium uptake and toxicity, 389
AM fungi, 673
Amino acids, 95, 103
Angiospermous, 167
Antarctic, 523
Anthracnose, 25
Aplin and Hill model, 517
Apoplast, 463
Apoplast and symplast, 389
Apoplastic permeability, 13
Aquatic plants, 587
Arbuscular mycorrhiza, 115
Arbuscular mycorrhizal fungi, 353
Arbuscular mycorrhizas, 327, 361
Arginine, 95
Ascochyta leptospora, 295
Ash, 623
Atmospheric CO_2, 235
Atomic force microscopy, 571
Autotetraploidy, 641
Avena sativa (oats), 5
β-1,3-glucanase, 531
Barley, 309
Basidiomycetes, 123, 133
Biochemistry, 227
Biomass partitioning, 495
Biosafety, 361
β-irradiation potentiation, 481
Bog restoration, 371
Brassica juncea, 75
Bryophyta, 503
Calcium, 445, 463
Callus and lignification, 601
CAM, 215, 433
Cantaloupe melon, 413
Carbon dioxide, 85
Carbon isotope discrimination, 471
Carbon partitioning, 309, 433
Carbon-isotope discrimination, 433
Cd(II), 481
Cell wall, 389
Cellular polarity, 503
Cell-wall apoplast, 1
Cell-wall permeability, 1
Chara, 389
Chilling, 53
Chitinase, 531
Chlorophyll *a* fluorescence, 215
Chlorophyll fluorescence, 649
Climatic variability, 243
Clusia, 215
CO_2 evolution, 155
CO_2 response, 615
Cocos nucifera L. (coconut), 227
Colletotrichum lindemuthianum, 579
Colletotrichum sublineolum, 25
Commelina communis, 463
Compartmentation, 423
Concentration, 235
Coniferous, 167
Cost of reproduction, 413
Cuticle, 579
Cutover bogs, 371
Cytoskeleton, 503
Dactylorhiza fuchsii, 335, 343
Densitometry, 197
Die-back, 601
Differentiation, 685
Diffusion in roots, 1
Dispersal, 523
Divalent metal ions, 61
Drought, 53, 235, 445
Drought resistance, 455
Drought stress, 327
Dynamic chamber technique, 257
Eastern Spain, 177
Ectomycorrhiza, 123, 539
Ectomycorrhizal fungi, 685
Ectomycorrhizas, 133
Elevated CO_2, 267, 309, 317
Endomembrane system, 503
Endophytes, 665
Epacridaceae, 665
Epicuticular wax, 579
Ericoid mycorrhiza, 665
Errata, 551
Erysiphe graminis (powdery mildew), 317
Eucalyptus urophylla, 539
Evolutionary comparative method, 35
Extracellular enzymes, 133
Extracellular matrix, 579
False break, 673
Fatty acid composition, 657
Fertilizer, 335
Floral sex ratio and lability, 413
Fluorescence, 279
Foliar nutrients, 487
Fraxinus excelsior, 623
Freeze substitution, 13
Fructan, 197
Fructan synthesis, 205
Fructose-2,6-bisphosphate, 697
Fructosyltransferase, 197, 205
Functional balance, 85
Fungal respiration, 167
Fungicide, 295
Garlic, 703
Gas pressurization, 587
Gene expression, 5, 685
Genetically modified micro-organisms, 361
Genets, 143
Genotoxicity, 481
Glomus intraradices, 531
Glycine max (soybean), 531
Glycolysis, 697
Grasses, 615
Growth, 287, 471, 495
Growth analysis, 53, 615
Growth and photosynthesis, 649
Growth curve, 517
Growth rate, 407
Hair root, 665
H^+-ATPase, 61
Hemibiotrophy, 25
Hemiparasite, 487
Hordeum distichum, 317
Host-pathogen interactions, 25
Infectivity, 531
Inflorescence, 631
Invertase, 205

Irradiance, 257, 407
Isolated ivy leaf cuticle, 571
Isozyme variation, 143
Jasmonic acid, 703
Karyotypes, 641
Laccaria laccata, 539
Lactuca sativa, 327
Late Quaternary, 177
Lead phytoextraction, 75
Leaf, 205
Leaf age, 317
Leaf and flower demography, 413
Leaf area, 235, 623
Leaf fall, 623
Leaf gas exchange, 279
Leaf litter, 155
Leaf litter decomposition, 167
Leaf litter mineralization, 123
Leaf thickness, 35
Leaf water potential, 487
Legume-based pasture, 673
Lethal yellowing, 227
Lichen, 517, 523
Life form, 615
Lignification, 5
Litter decomposition, 123
Lobe growth, 517
Localization, 423
Lolium perenne, 205
Malate and citrate deacidification, 215
Mass and energy exchange, 587
Mediterranean climate, 673
Meiosis, 641
Microtubules, 503
Mineral nutrition, 353
Mineralization, 133
Modelling, 587
Multiflorous, 5
Mycorrhizal colonization, 703
N composition, 103
N cycling, 103
^{15}N isotope dilution technique, 353
N_2 fixation, 353
Naked (huskless), 5
Needle nitrogen, 95
Nitrogen, 85, 471
Nitrogen dioxide, 257
Nitrogen nutrition, 407
Nutrient cycling, 123, 133
Nutrient leaching, 267
Nutrient status, 267
O_3, 267
Oligosaccharide, 423
Orchids, 335, 343
Orchis morio, 335, 343
Ozone, 279, 287, 649
Ozone episodes, 623
Palaeoecology, 177, 243
Palynology, 177
Parasitic angiosperm, 495
Parmelia conspersa, 517
Parnassia (Saxifragaceae, Parnassiaceae), 641
Phaseolus vulgaris, 353, 579
Phloem exudate, 103
Phosphofructokinase, 697
Phosphorus transfer, 685
Photosynthesis, 215, 235, 279, 287, 309, 317, 495
Phragmites, 601
Physiological heterogeneity, 685
Physiological status, 115
Physiology, 227
Phytotoxins, 601
Picea abies, 243
Picea abies (Norway spruce), 267
Picea abies/*Amanita muscaria* ectomycorrhiza, 697
Picea sitchensis, 155
Pinus sylvestris, 155
Pinus sylvestris L., 95
Pisolithus spp., 539
Plant cell cultures, 553
Plant disease, 295
Plant growth, 703
Plantago major, 287
Plasma membrane, 61, 389
Polytrichum commune, 649
Population, 143
Populus sp. water relations, 455
Populus trichocarpa, 445
Potassium, 463
Powdery mildew (*Erysiphe graminis hordei*), 309
Prediction, 615
Protozoa, 371
Pseudomonas fluorescens, 115
Puccinia coronata, 295
Quercus robur, 279
Ragweed, 75
Rain forest tree, 487
Red:far-red ratio, 343
Relative humidity, 257
Resource re-allocation, 413
Respiratory pathways, 407
Rhizobium, 361
Rhizobium leguminosarum bv. *viciae*, 657
Rind regeneration, 13
Root colonization, 115
Root competition, 335
Root restriction, 287
Root system morphology, 361
Scent glands, 631
Scleroderma cepa, 539
Sclerotia, 13
Sclerotinia minor, 13
Secondary metabolites, 553
Sedum telephium, 433
Shade, 343
Shade-tolerance, 407
Sink competition, 495
SO_2 fumigation, 167
Soil inoculum, 665
Soil pH, 539
Soil temperature, 243
Solute movement, 1
Somatic incompatibility, 143
Soredia, 523
Sorghum bicolor, 25
Sphagnum recurvum, 649
Stomata, 235, 445, 463
Stomata density, 35
Stomatal conductance, 35, 487
Stomatal regulation, 455
Strategy, 553
Sucrose, 197, 423
Suillus collinitus, 143
Sulphite, 155
Superoxide dismutase, 327
Symbiotic efficiency, 657
Temperature, 471, 657
Testate amoebae, 371
Thin-layer chromatography, 197
Thlaspi caerulescens, 75
Thlaspi rotundifolium, 75
Tolerance, 53
Transport, 61
Ultrastructure, 571
Vegetarian, 295
Vicia faba L. (faba bean), 657
Volatiles, 631
Voodoo lily, 631
Wetting and drying, 673
Winter dieback, 243
Xylem embolism, 455
Xylem sap., 103
Zea mays, 75
Zinc, 61
Zn(II), 481
Zea mays (maize), 53